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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------------------------------------------------------------------------------------|-------------|----------------------|-------------------------------------------|-----------------------------|
| 10/807,488 | 03/23/2004 | Ronald P. Swanson | 58696US002 | 3060 |
| 32692 7590 10/31/2007 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427 | | | EXAMINER WOLLSCHLAGER, JEFFREY MICHAEL | |
| | | | ART UNIT 1791 | PAPER NUMBER |
| | | | NOTIFICATION DATE 10/31/2007 | DELIVERY MODE ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/807,488 | SWANSON, RONALD P. | |
| | Examiner | Art Unit | |
| | Jeff Wollschlager | 1791 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 1-15 and 21-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Applicant's amendment to the claims filed August 7, 2007 has been entered. Claim 16 is currently amended. Claims 1-15 and 21-23 remain withdrawn from further consideration.

Claims 16-20 are currently under examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16, 17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimoda et al. (U.S. 6,362,020) in view of Keck (US 3,890,547) and Akira (U.S. 4,952,281).

Regarding claim 16, Shimoda et al. teach a method of removing the curl from a web/substrate in a roll ((262), (901)) system by inducing a plastic deformation/strain in the web/substrate with a roller type curl corrector (Abstract; Figures 7 and 9; col. 3, lines 16-30) wherein the web path is such that only one surface of the web/substrate is contacted by the rollers over the entire web path (Figure 7). The rolls shown in Figure 7 would co-rotate, clockwise, based on the travel direction of the web/substrate. Shimoda et al. further disclose controlling the spacing between the rollers, thereby controlling the radius of the web through the moving web path (Figure 7 element (703); col. 7, lines 1-18).

Shimoda do not expressly disclose measuring the distance that the radiused section of the web extends into the third portion of the web path with a sensor to determine a measured

Art Unit: 1791

position and/or radius of the radiused section and creating a signal based on the measured position and/or the radius to control the radius based on the signal. Further, while Shimoda et al. disclose processing rolls of material, as opposed to individual sheets of material, which under one very reasonable interpretation meets the art recognized meaning of the term "indeterminate length", Shimoda et al. do not expressly disclose processing a web of actual indeterminate length.

However, Keck teaches a method of measuring the distance that the radiused section of the web extends into a web path with a sensor to determine a measured position of the radiused section, creating a signal based on the measured position and controlling the speed of the rollers to ensure the web of material remains within the desired position (Abstract; Figure 1; col. 2, lines 29-57; col. 4, lines 16-64).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed the speed control device disclosed by Keck in the method disclosed by Shimoda et al. for the purpose of ensuring Shimoda et al.'s web of material did not either drop out of the bottom of the roller device or rise out of the top of the roller device.

The examiner notes that by employing the device and method of Keck in the device and method of Shimoda et al. at the suggested location (i.e. at the bottom of the sagging portion of the web) that the radius of Shimoda et al.'s web is intrinsically controlled by ensuring that the web remains within the confines of Shimoda et al.'s roller device.

Additionally, Akira discloses a method of controlling the wrap angle/radius of a sheet with a controller wherein a splicing mechanism is employed to provide for a continuous operation (Abstract; Figure 2 (12)).

Art Unit: 1791

Accordingly, it would have been *prima facie* obvious to one having ordinary skill at the time of the claimed invention to have employed a splicing mechanism in the method of Shimoda et al., as suggested by Akira, to splice/connect the rolls employed by Shimoda et al. in order to achieve a more productive and continuous operation.

As to claim 17, Shimoda et al. disclose rollers (Figure 7).

As to claims 19 and 20, Akira suggests controlling the wrap angle/radius as a function of the diameter of the roll of the web (col. 5, lines 40-47; Abstract).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimoda et al. (U.S. 6,362,020) in view of Keck (US 3,890,547) and Akira (U.S. 4,952,281), as applied to claims 16, 17, 19 and 20 above, and further in view of either of Crowley et al. (U.S. 6,626,343) or Calvert (U.S. 6,820,671).

As to claim 18, the method of claim 16 is disclosed by the prior art as set forth above. Further it is noted that Shimoda et al. employ a plurality of closely spaced rollers. However, Shimoda et al. do not disclose employment of a belt as the co-rotating members. However each of Crowley et al. (col. 18, lines 16-21) and Calvert (col. 4, line 62- col. 5, line 2) individually disclose the art recognized equivalence and interchangeability of belts and rollers.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the plurality of closely spaced rollers disclosed by Shimoda et al. with a belt as suggested by either of Crowley et al. or Calvert since both Crowley and Calvert suggest that rollers and belts are art recognized interchangeable and equivalent alternatives.

Response to Arguments

Applicant's arguments filed August 7, 2007 have been fully considered, but are moot in view of the new grounds of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Thursday 7:00 - 4:45, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1791

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

Jeff Wollschlager
Examiner
Art Unit 1791

October 22, 2007

af

CHRISTINA JOHNSON
SUPERVISORY PATENT EXAMINER